

CONTROLLED PRESSURE FUEL NOZZLE SYSTEM

ABSTRACT

A multi-staged gas turbine engine fuel supply system includes a plurality of fuel injectors and at least first and second staged fuel injection circuits in each of the fuel injectors. Each of the first and second staged fuel injection circuits includes first and second fuel injection points and at least first and second fuel nozzle valves operable to open at different first and second crack open pressures and controllably connected to the first and second staged fuel injection circuits, respectively. A single fuel supply manifold is connected to all of the fuel nozzle valves. A single fuel signal manifold is controllably connected to all of the first and second fuel nozzle valves. The fuel injector may have a valve housing with one of the first fuel nozzle valves and one of the second fuel nozzle valves contained therein.